Noise-Robust Parameter Estimation Of Linear Systems

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Summary

The parameter estimation problem of linear systems from input output measurements, corrupted with nonwhite noise of unknown covariance, is considered. Under this realistic situation, the least squares parameters estimation is known to be biased. In this paper, a recursive parameters estimation algorithm, which is unbiased for a wide class of measurement noise, is developed. Monte Carlo simulation results show the effectiveness of the developed parameters' estimator and its superiority over the least squares-based estimator.

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